PART I Authorization to Operate

A. The permittee is authorized to operate a Class V Injection Well at the facility described in the permit application and in the cover page of this permit, in accordance with the provisions set forth in this permit.

B. Only wastewater described in the permit application shall be injected.

C. Injected wastewater shall be limited to slurry generated from washing rock and coal recovered from the Dolomite Mine tailings pile located on-site.

D. This permit and the authorization to inject shall remain in effect until the expiration date stated on the cover page of this permit. If the permittee desires to continue injection past the expiration date of this permit, the permittee shall request a permit reissuance at least 180 days prior to expiration of this permit.

PART II Construction Requirements

A. Injection Well Requirements

1. Injection shall be via the injection well proposed in the original permit application. ADEM approval must be obtained prior to construction and operation of auxiliary well(s). The permittee must provide the following 30 days prior to the planned construction of the well(s):

    a) a plan view of the site which shows the location of the well(s)

    b) a sectional view of the well(s) which indicates the depth of the well(s) and how the well(s) will be constructed

2. The injection zone shall be limited to the section of the abandoned Dolomite underground coal mine described in the original permit application.

3. The annulus around the injection well casing shall be grouted from immediately above the injection zone to the surface in order to prevent the migration of surface water or injected slurry.

4. The permittee shall submit to ADEM as built descriptions and geologic logs of the injection well within 60 days after drilling.

5. The permittee shall maintain a means of sampling the wastewater being injected after treatment and prior to injection.

B. Monitoring Well Construction

1. Prior to injection, the permittee shall construct monitoring wells for the purpose of monitoring groundwater quality.

2. At least two monitoring wells shall be completed into the injection zone which is the abandoned Dolomite underground coal mine.

3. Monitoring wells shall be located immediately hydraulically downgradient of the injection well.

4. The annulus around each monitoring well casing shall be grouted above the screened interval to the surface in order to prevent the migration of surface water or injected slurry.

5. The surface installation shall include a concrete protective pad around the base of the well, a metal protective casing, and a locking cap.

6. The permittee shall submit to ADEM as built descriptions and geologic logs of the monitoring wells within 60 days after drilling.

7. All surface water shall be routed away from each monitoring well's surface installation.

8. The monitoring well installation shall be completed and monitoring wells sampled prior to the use of the injection system. The monitoring wells shall be constructed in accordance with this permit and plans submitted to ADEM.

C. Modifications

A permit modification shall be obtained prior to modifying any injection well or supporting surface. Modification includes any action that will change the configuration of the well beneath the surface, the methods of monitoring injection, or will result in injection of a fluid not specifically authorized by this permit.

PART III Monitoring and Operating Requirements

A. Injection Fluid

1. The permittee shall not inject any substance that is defined as hazardous or toxic by Federal or State laws or regulations or any substance not identified in the application for this permit. The use or injection of substances other than those identified in the permit application is prohibited.

2. The permittee shall monitor the fluid to be injected as specified in Appendix A of this permit.

3. The permittee shall not exceed the limits established in Appendix A of this permit. Injection is prohibited if this condition is not satisfied.

4. The ADEM may change the sampling requirements if the sampling data indicates a need to do so.

B. Loss of Injection Zone Integrity

The permittee shall cease injection if a loss of injection zone integrity occurs during operations.

C. Dewatering Well

During injection, the permittee shall withdraw water from the dewatering well at a volume and rate equal to or greater than the slurry injection rate. Injection shall cease when this condition is not satisfied.

D. Monitoring Well

1. The permittee shall sample the monitoring wells in accordance with Appendix B of this permit. The permittee is required to sample the monitoring wells prior to injection in order to establish background groundwater quality conditions.

2. The permittee shall not exceed the limits established in Appendix B of this permit.

3. The permittee shall purge the monitoring wells prior to sampling.

4. ADEM may change the sampling requirements if the sampling data indicates a need to do so.

E. Test Procedures

Test procedures for the analysis of pollutants shall conform to 40 CFR Part 136 of the Federal Register and guidelines published pursuant to Section 304(h) of the Federal Water Pollution Control Act (FWPCA). If more than one method of analysis of a substance is approved for use, a method having a detection limit lower than the permit limit shall be used. If the detection limit of all methods is higher than the permit limit, the method having the lowest detection limit shall be used and a report of less than detection limit shall constitute compliance. However, should the Environmental Protection Agency (EPA) approve a method with a lower detection limit during the term of this permit the permittee shall use the newly approved method.

F. Operation

1. The injection well operated under this permit shall function properly and wastewater shall not surface. Should the injection well fail to function properly, the permittee shall take immediate corrective action to include cessation of injection.

2. The permittee must submit an effective spill prevention plan to address all aspects of transportation and disposal of liquid waste related to injection operations at the facility. The spill prevention plan must describe the operation, type of liquid waste generated, methods of liquid waste disposal, and methods used for transport of liquid wastes to disposal sites. The plan must describe the measures to be used to detect leaks or ruptures in pipelines and to detect plugging or overflow conditions at injection wells. Where detection devices are used to automatically detect leaks and ruptures, the plan must describe how often each device is tested to ensure proper operation, who performs the testing, and require a written record to be maintained of the date of testing and the person performing the testing. When visual inspections are made to detect leaks and ruptures, the plan must describe the inspection, frequency of inspection, the persons who perform the inspections and reports and records to be maintained to document the date of inspections, who performed the inspections, and the findings.

   The plan must describe the containment structure installed at the injection well; devices installed in containment structures to automatically detect when a well plugs and which will automatically shut down the pumping system; describe the frequency of testing for such devices to ensure proper operation; indicate the persons who perform the testing; and identify reports and records to be made to document the person(s) performing such testing, date and results of all testing and inspection.

   a) The plan must include emergency procedures to be followed to contain any spill that occurs and to mitigate the impact to receiving waters. Provisions must be included for notification of appropriate regulatory authorities (list) in the event such a spill occurs. The plan must state that a site-specific cleanup and mitigation plan will be developed in the event of a spill to minimize adverse impacts to the environment from that spill.

   b) The plan submitted must be prepared by an Alabama Registered Professional Engineer and signed by a company official. A letter by the company official must be submitted to the Department certifying that the spill protection plan satisfies conditions of this permit and has been implemented.

   c) The permittee shall address to the satisfaction of the Department, any deficiencies in the plan identified by the Department.

3. The permittee shall adopt the following best management practices:

   a) Inspect terminal equipment, tanks, and chemical containers regularly for leaks.

   b) Calibrate treatment and application equipment regularly.

   c) Comply with Federal, State, and local solids and liquid waste disposal regulations.

PART IV Records, Reports, & Submittals

A. Records

1. The permittee shall record the information listed below for all monitoring activities:

   a) The date, exact place, and time of sampling or sampling measurement(s);

   b) The name of individual(s) who perform the sampling or measurement(s);

   c) The date(s) analyses were performed;

   d) The name of the individual(s) who performed the analyses;

   e) The analytical or technical methods used;

   f) The results of each analysis performed; and

   g) The completed chain-of-custody forms for all samples collected.

2. The permittee shall retain all records concerning the data used to complete the permit application, the operation of the wells, and the nature and composition of pollutants injected; to include records of the calibration of instruments, meters and gauges, quality control records, and recordings from continuous monitoring instrumentation; until at least three years after the closure of well(s).

3. When requested by ADEM, the permittee shall deliver copies of any of the records maintained in accordance with this permit.

B. Reports

1. The permittee shall submit not later than 28 days after the reporting period, a monitoring report which shall include:

   a) The date and exact place of sampling;

   b) The results of each analysis performed.

2. **Within 180 days upon the effective date of this permit, the permittee must enroll and participate in the Department's web-based electronic environmental (E2) DMR reporting system.** Once the permittee is enrolled in the E2 DMR system, the permittee must utilize the system for the submittal of DMRs. The Permittee Participation Package may be downloaded online at **https://e2.adem.alabama.gov/npdes**. If the E2 DMR system is down due to technical problems originating with the Department's system, the permittee is not relieved of the obligation to submit DMR data by the required submittal

date via faxing, e-mailing, mailing, or hand-delivery of data such that they are received by the required reporting date.

3. The permittee shall report to ADEM any of the following:

   a) Any planned action which will change the use of the injection wells, will result in injection of a fluid different from that authorized by this permit, will change the method of operations of any injection well, or will change the method of the monitoring of well operations or injected fluids.

   b) Any planned transfer of ownership of all or part of the permitted facility.

   c) Any relevant facts of which the permittee becomes aware which should have been submitted in a permit application and any corrections to data previously submitted in a permit application.

4. Other Submittals

   Studies, engineering reports, plans and specifications, plugging and abandonment plans, logging reports, and other technical documents submitted to comply with this permit shall be prepared by or under the supervision of qualified persons defined the Underground Injection Control (UIC) Regulations of the ADEM.

PART V Plugging and Abandonment

A. Within 90 days from the effective date of this permit, the permittee shall submit to the ADEM a Plugging and Abandonment Plan for the injection well.

B. The permittee shall submit to ADEM an updated, well specific Plugging and Abandonment Plan within the 90 day period immediately following the termination of the useful life of any injection well and shall properly plug and abandon the injection well within 180 days following the termination.

C. The permittee shall submit a report to ADEM documenting the plugging and abandonment of any well within 30 days of the date that abandonment actions are completed.

D. The permittee shall perform any abandonment and closure actions that may be required by ADEM to remove a threat to groundwater quality or to the health of persons which is caused by the injection activity.

PART VI Permit Modification, Revocation, Suspension, and Termination

A. ADEM may impose emergency additional conditions to this permit when necessary to protect waters of the state from pollution. These conditions may include suspension of the permit to inject and shall remain in effect until the permit is modified, revoked, suspended or terminated in accordance with the UIC Regulations of ADEM.

B. Non-emergency permit modification, revocation, suspension, and termination actions shall be accomplished in accordance with ADEM Administrative Code Rule 335-6-8.

PART VII General Provisions

A. The permittee shall comply with all provisions of the UIC Regulations of the ADEM and shall comply with all provisions of this permit and shall reduce or halt injection if needed to maintain compliance with the permit and regulations.

B. The permittee shall comply with all applicable Federal and State hazardous waste management regulations.

C. The permittee shall allow members of ADEM staff to:

1. Access property and records of the permittee for purposes of inspection.

2. Collect samples of the injected fluids, process and wastewater streams associated with the permitted injection wells.

3. Collect samples from any monitoring wells.

4. Obtain copies of records upon request.

D. The permittee shall immediately take all reasonable steps to minimize or correct any adverse environmental impact resulting from the operation of the permitted injection wells.

E. This permit does not convey any property rights of any sort, or any exclusive privilege.

F. The filing of a request by the permittee for a permit modification, revocation, and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

G. Any noncompliance with this permit constitutes a violation of the Alabama Water Pollution Control Act and/or the UIC Regulations and is grounds for enforcement action such as permit termination, revocation, modification; or denial of a permit renewal application.

H. Injection into waters of the state, which in this case is groundwater, in accordance with this permit shall not result in the exceedance of any primary Maximum Contaminant Level (MCL) in groundwater as established by the Environmental Protection Agency. Injection into groundwater, in accordance with this permit shall not result in a violation of a surface water quality standard.

I. All provisions of ADEM Admin. Code Rule 335-6-8-.12 are incorporated as terms and conditions of this permit by reference.

APPENDIX A

The wastewater discharge shall be limited and monitored by the permittee as specified below:
The following limitations shall apply to a representative sample of the decant of the injection slurry:

EFFLUENT CHARACTERISTIC	UNITS	DISCHARGE LIMITS	MONITORING REQUIREMENTS	
			FREQUENCY	SAMPLE TYPE
pH	Standard Units	Monitor	Quarterly	Grab
Total Suspended Solids	mg/l	Monitor	Quarterly	Grab
Total Dissolved Solids	mg/l	Monitor	Quarterly	Grab
Antimony	mg/l	.006	Quarterly	Grab
Arsenic	mg/l	.010	Quarterly	Grab
Barium	mg/l	2	Quarterly	Grab
Beryllium	mg/l	.004	Quarterly	Grab
Cadmium	mg/l	.005	Quarterly	Grab
Chromium	mg/l	.1	Quarterly	Grab
Copper	mg/l	Monitor	Quarterly	Grab
Cyanide	mg/l	0.2	Quarterly	Grab
Lead	mg/l	.015	Quarterly	Grab
Mercury	mg/l	.002	Quarterly	Grab
Selenium	mg/l	0.05	Quarterly	Grab
Thallium	mg/l	.002	Quarterly	Grab
Iron	mg/l	Monitor	Quarterly	Grab
Manganese	mg/l	Monitor	Quarterly	Grab
Volume Injected	Gals/day	=/< Volume Withdrawn	Quarterly	Total
Volume Withdrawn	Gals/day	Report	Quarterly	Total

APPENDIX B

Groundwater monitoring well, MW-01, shall be limited and monitored by the permittee as specified below*:

EFFLUENT CHARACTERISTIC	UNITS	DISCHARGE LIMITS	MONITORING REQUIREMENTS	
			FREQUENCY	SAMPLE TYPE
pH	Standard Units	Monitor	Quarterly	Grab
Total Suspended Solids	mg/l	Monitor	Quarterly	Grab
Total Dissolved Solids	mg/l	Monitor	Quarterly	Grab
Antimony	mg/l	.006	Quarterly	Grab
Arsenic	mg/l	.010	Quarterly	Grab
Barium	mg/l	2	Quarterly	Grab
Beryllium	mg/l	.004	Quarterly	Grab
Cadmium	mg/l	.005	Quarterly	Grab
Chromium	mg/l	.1	Quarterly	Grab
Copper	mg/l	Monitor	Quarterly	Grab
Cyanide	mg/l	0.2	Quarterly	Grab
Lead	mg/l	.015	Quarterly	Grab
Mercury	mg/l	.002	Quarterly	Grab
Selenium	mg/l	0.05	Quarterly	Grab
Thallium	mg/l	.002	Quarterly	Grab
Iron	mg/l	Monitor	Quarterly	Grab
Manganese	mg/l	Monitor	Quarterly	Grab

*Due to the fact that inorganic constituents can sometimes be present at levels which exceed drinking water standards, the permit will allow the discharge to continue as long as the discharge does not cause a significant increase in levels above background concentrations established prior to injection.

ADEM Permit Rationale

Date: January 10, 2019

Prepared by: Jessica Spence

Permit Applicant Name: Southern Red Rock, LLC
1080 3rd Street
Pleasant Grove, AL 35127

Facility Name: Southern Red Rock

Location: 1080 3rd Street
Pleasant Grove
Jefferson County, Alabama
Lat:N 33.503900/Long:W -86.987500
Town 18S, Range 4W, Section6

UIC Permit Number ALSI9937702

Draft Permit is: Reissuance due to expiration

Injection Description: Injection of slurry generated from washing rock and coal recovered from the Dolomite Mine tailings pile

Discussion: Standard permit drafted.

1. No hazardous injection
2. Sampling point required
3. Discharge must be sampled quarterly
4. Results must be submitted in a timely manner
5. Monitoring wells will be sampled quarterly
6. BMPs included in permit
7. E2 DMR Requirement included in permit